



CARBON CAPTURE COALITION

March 29th, 2019

The Honorable Lamar Alexander
Chairman
Subcommittee on Energy and Water Development
Senate Committee on Appropriations
United States Senate
Washington, DC 20510

The Honorable Diane Feinstein
Ranking Member
Subcommittee on Energy and Water Development
Senate Committee on Appropriations
United States Senate
Washington, DC 20510

Dear Chairman Alexander and Ranking Member Feinstein,

On behalf of over 60 companies, unions and environmental, energy and agricultural organizations in the Carbon Capture Coalition (see attached participant list) and our partners who are working together to advance deployment of carbon capture, utilization, storage and removal, we thank you for significant funding of the U.S. Department of Energy's (DOE) Office of Fossil Energy (FE) for these technologies in the recently enacted FY 2019 Omnibus. The U.S. has been a global leader on carbon capture, and there is bipartisan consensus on the benefits of capturing and utilizing carbon dioxide (CO₂). This technology represents a genuine win-win for our nation's economy and environment, one that will preserve and create high-paying jobs through investment in energy-producing and industrial states and regions of our country.

Last year, Congress made a critical first step in catalyzing a carbon capture, utilization, storage and removal industry in the U.S. through the enactment of the FUTURE Act to expand and reform the Section 45Q tax credit for CO₂ storage and beneficial use. These changes incentivize carbon capture across industries and encourage the creation of new carbon utilization markets for CO₂ and its precursor carbon monoxide. Additionally, the bicameral and bipartisan USE IT Act, if enacted, would provide research, development, and demonstration (RD&D) support and begin to address infrastructure needs for widespread deployment of these technologies. However, today's technology remains relatively expensive to implement in power generation and some key industrial sectors. Improved carbon capture technologies and understanding derived from scale-up will be needed to reduce costs, which is why legislation like the Carbon Capture Modernization Act has been introduced to encourage carbon capture in the power sector.

As we have seen with the success of wind and solar, carbon capture will need a combination of federal incentives such as tax credits, federal funding for RD&D, and federal loan guarantees to facilitate private investment. This support is needed to improve the cost and performance of the technology so that it is cost-competitive with other low and zero-emission technologies. Aggressive and sustained federal support must play a key role in helping the private sector to commercialize carbon capture technologies. It is well established that there are long lead times for advancing energy technologies from concept to demonstration to commercialization, and carbon capture is capital intensive, which increases financial risk and makes it difficult without federal support to attract sufficient private investment for scaling up these in the marketplace.

Therefore, we respectfully request that in FY 2020, DOE Fossil Energy's Carbon Capture and Carbon Storage programs be funded at least at \$208,767,000, a \$10,000,000 increase over last year. This federal funding should in no way be limited to supporting only basic research, and these resources should prioritize the development and testing of technologies at lab, pilot, demonstration and commercial scales. Demonstration projects are especially critical to advancing carbon capture, utilization, storage and removal, and new, emerging technologies would greatly benefit from targeted federal

support. Historically, Congress has recognized that this is an appropriate role for DOE, and we request that funding be explicitly available for demonstration and commercial-scale work.

We also raise four additional points for further consideration.

First, we encourage specific, targeted research, development and demonstration of carbon capture technologies from diverse sources, including from coal and natural gas power plants, industrial facilities and ambient air through direct air capture. We also encourage additional funding for implementation of demonstration projects under the Carbon Storage Program to be linked with commercial power and industrial carbon capture projects where possible.

Second, we strongly support the focus on large-scale transformational pilot carbon capture projects and are pleased to see that Congress appropriated an additional \$25 million for this program in FY 2019. The transformational technologies under development and moving forward with this funding represent an entirely new way to convert energy that will enable a step-change in performance, efficiency, and cost of electricity as compared to today's state-of-the-art technologies. We recommend that the large-scale transformational pilot program receive the funding necessary to advance these technologies in a final FY 2020 bill.

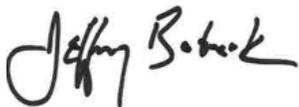
Third, loan guarantees can become an important tool to finance carbon capture projects. Key reforms to the program could make it more effective, including lowering the overall level of fees, clarifying the calculation of credit subsidy fees, and lifting restrictions on loan guarantees for projects receiving federal grants. We recommend that the Loan Program Office be preserved in the final FY 2020 bill and that Congress take a closer look at improving the program's effectiveness, particularly for carbon capture projects. Specifically, we advocate that credit subsidy be appropriated for carbon capture projects under the advanced fossil energy program that have received conditional commitments and that the committee explore ways to reduce other costs of the program, such as facility fees, DOE consultant fees, and application fees that are detrimental to project developers and have deterred them from even participating in the program.

Fourth, we support continued RD&D on carbon capture, storage, removal and utilization technologies at FE, building on the existing work in the program. The recent National Academies of Sciences report, "Negative Emissions Technologies and Reliable Sequestration: A Research Agenda," laid out an ambitious RD&D roadmap. As Congress considers legislation to reauthorize FE, we believe FY20 can be a time to begin building towards this roadmap.

Building on recent momentum with reform and expansion of the Section 45Q tax credit and recently introduced bipartisan legislation, we respectfully urge you to continue to robustly fund carbon capture, storage, removal, and utilization in the FY 2020 budget. We stand ready work with you and the DOE, and to provide any additional information you might need.

Thank you for your consideration of our requests.

Sincerely,



Jeffrey Bobeck
Co-Director, Carbon Capture Coalition
Center for Climate and Energy Solutions



Brad Crabtree
Co-Director, Carbon Capture Coalition
Great Plains Institute



CARBON CAPTURE COALITION

Participants

AFL-CIO
Air Liquide
Air Products
AK Steel
American Carbon Registry
ArcelorMittal
Arch Coal
Archer Daniels Midland Co.
Baker Hughes, a GE Company
BPC Action
Carbon180
Carbon Wrangler LLC
Clean Air Task Force
ClearPath Action
Cloud Peak Energy
Conestoga Energy Partners
Core Energy LLC
EBR Development LLC
EnergyBlue Project
Energy Innovation Reform Project
Glenrock Petroleum
Great River Energy
Greene Street Capital
Impact Natural Resources LLC
ION Engineering LLC
International Brotherhood of
Boilermakers
International Brotherhood of
Electrical Workers
Jackson Hole Center for Global
Affairs
Jupiter Oxygen Corporation
Lake Charles Methanol
LanzaTech
Linde LLC
Mitsubishi Heavy Industries
America, Inc.
National Audubon Society

National Farmers Union
National Wildlife Federation
NET Power
New Steel International, Inc.
NRG Energy
Occidental Petroleum Corporation
Peabody Energy
Prairie State Generating Company
Praxair, Inc.
Renewable Fuels Association
Shell
SMART Transportation Division
(of the Sheet Metal, Air, Rail and
Transportation Workers)
Summit Power Group
Tenaska Energy
The Nature Conservancy
Third Way
Thunderbolt Clean Energy LLC
United Mine Workers of America
United Steel Workers
Utility Workers Union of America
White Energy
Wyoming Outdoor Council

Observers

Algae Biomass Organization
Carbon Engineering
Cornerpost CO2 LLC
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University of Wyoming
Institute of Clean Air Companies
Melzer Consulting
Tellus Operating Group
World Resources Institute